

REMARKS

Applicants thank Examiner Patel for the analysis contained in the Office Action dated September 1, 2005. Claim 1 has been amended as indicated above. Claims 1 and 2 remain pending in the present application.

Claim Rejection – 35 U.S.C. 102

Claims 1 and 2 presently stand rejected under 35 U.S.C. 102 as being anticipated by Peil (U.S. 4,877,217). Applicants respectfully traverse this rejection.

With the present invention, seals are arranged in pairs – each pair consisting of a primary seal and a redundant back up seal which performs no active sealing function. Should the primary seal fail, the redundant seal will then perform the sealing function previously performed by the primary seal. In a blow out preventer, this enables servicing of the blow out preventer to be deferred until work on the well is completed. Applicants have amended Claim 1 to clarify what is meant by a “redundant” seal.

It is respectfully submitted that this critical relationship is not present in the Peil reference.

Neither seal 30 nor seal 32 are “redundant” seals. Seal 30 performs an active sealing function of preventing well bore fluids from migrating in a first direction along ram shaft 26. Seal 32 performs an active sealing function of preventing hydraulic fluid from first chamber 89 of chamber 24 from migrating in a second direction along ram shaft 26.

If seal 32 should fail, fluid will be lost from first chamber 89. As clearly stated at column 4, line 41, “**evacuation of the hydraulic fluid from the chamber 89 results in the closing of the ram 16.**” The ability to open the rams again to complete work is lost and the blow out preventer will cease to function. An optional coil spring 92 is provided, to ensure that this closure is rapid.

In addition, Peil makes provision for a “leak detection port 34” which is described at column 2, line 38. Leak detection port 34 provides “for fluid leakage externally of the body 20

which can visually be observed if either of the seals 30 and 32 become defective." Of course, this leak detection port 34 provides a path which would accelerate the loss of fluids. Peil does not indicate in what manner he proposes to capture the escaping fluids.

If one were to convert Peil over to the present invention, one would use a primary seal with a redundant back up seal to replace the sealing function of either seal 30 or seal 32. Of course, such conversion would require implementation of the present invention.

In view of the foregoing amendments and arguments, applicants respectfully submit that the present application is now in condition for allowance. Applicants, therefore, request the early issue of a Notice of Allowance. Should any issues remain needing resolution prior to allowance, the Examiner is invited to contact the undersigned attorney directly by telephone.

Respectfully submitted,

CHRISTENSEN O'CONNOR
JOHNSON KINDNESS^{PLLC}



Kevan L. Morgan
Registration No. 42,015
Direct Dial No. 206.695.1712

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Date: November 30, 2005

Delaware L. Whitney

KLM:sdd

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100